

CLAIM AMENDMENTS

1. (Currently Amended) A dual output transformerless power supply comprising:

a first dc output stage responsive to an ac input, having a first wave rectifier including at least one diode with a regulated dc output exhibiting a first polarity, and including a first voltage regulator having at least one zener diode; and

a second dc output stage responsive to said ac input, having a second wave rectifier including at least one diode with a regulated dc output inverted by an inverter connected to said second wave rectifier to be said first polarity, and including second voltage regulator having at least one zener diode.

2. (Canceled)

3. (Currently Amended) A dual output transformerless power supply, according to claim 1, wherein said ~~second dc output stage further comprises:~~
~~an inverter which~~ includes a transistor connected to said second wave rectifier.

4. (Currently Amended) A dual output transformerless power supply, according to claim 1, wherein said ~~second dc output stage further comprises:~~
~~an inverter which~~ includes a transistor in a common emitter configuration connected to said second wave rectifier.

5. (Currently Amended) A dual output transformerless power supply, according to claim 1, wherein said ~~second dc output stage further comprises:~~
~~an inverter which~~ includes a transistor in a common source configuration connected to said second wave rectifier.

6. (Original) A dual output transformerless power supply, according to claim 1, further comprising:

a first capacitor connected to said first dc output stage; and

a second capacitor connected to said second dc output stage.

7. (Original) A dual output transformerless power supply, according to claim 1, wherein:

said first voltage regulator circuit is connected to said first wave rectifier; and
said second voltage regulator circuit is connected to said second wave rectifier.

8. (Original) A dual output transformerless power supply, according to claim 1, further comprising:

said first voltage regulator circuit connected to said first wave rectifier having one or more zener diodes in series connected to a first filter; and

said second voltage regulator circuit connected to said second wave rectifier having one or more zener diodes in series connected to a second filter.

9. (Original) A dual output transformerless power supply, according to claim 1, further comprising:

said first voltage regulator circuit connected to said first wave rectifier having a first and second zener diode in series; and

said second voltage regulator circuit connected to said second wave rectifier circuit having a first and second zener diode in series.

10. (Original) A dual output transformerless power supply, according to claim 1, further comprising:

a first capacitor connected to the output of said first wave rectifier; and

a second capacitor connected to the output of said second wave rectifier.

11. (Original) A dual output transformerless power supply, according to claim 1, further comprising:

a relay voltage which is controlled by a microprocessor.

12. (Original) A dual output transformerless power supply, according to claim 11, wherein the microprocessor is controlled by a level shifter circuit.

13. (Currently Amended) A dual output transformerless power supply comprising:

first means for rectifying an ac input generating a first dc output signal having a first polarity;

second means for rectifying an ac input generating a second dc output signal ~~having said first polarity; and~~

means for inverting said second dc output signal to be said first polarity.

14. (Canceled)

15. (Currently Amended) A dual output transformerless power supply, ~~according to claim 13, further~~ comprising:

first means for rectifying an ac input generating a first dc output signal having a first polarity;

second means for rectifying an ac input generating a second dc output signal having said first polarity; and

means for shifting said ac input 180 degrees for input into said second means for rectifying.

16. (Original) A dual output transformerless power supply, according to claim 13, further comprising:

first means for filtering said first dc output signal.

17. (Original) A dual output transformerless power supply, according to claim 13, further comprising:

second means for filtering said second dc output signal.

18. (Original) A dual output transformerless power supply, according to claim 16, further comprising:

second means for filtering said second dc output signal.

19. (Original) A dual output transformerless power supply, according to claim 13, further comprising:

first means for voltage regulation of said first dc output signal.

20. (Original) A dual output transformerless power supply, according to claim 13, comprising:

second means for voltage regulation of said second dc output signal.

21. (Original) A dual output transformerless power supply, according to claim 19, further comprising:

second means for voltage regulation of said second dc output signal.

22. (Original) A dual output transformerless power supply comprising:
first means for rectifying an ac input generating a first dc output signal having a first polarity;

first means for filtering said first dc output signal connected to said first means for rectifying;

first means for voltage regulation connected to said means for filtering;

second means for rectifying an ac input generating a second dc output signal having said first polarity;

second means for filtering said second dc output signal connected to said second means for rectifying;

second means for voltage regulation connected to said second means for filtering;

means for inverting connected to said second means for voltage regulation.

23. (Currently Amended) A method for providing a dual output transformerless power supply comprising the steps of:

converting an ac input signal during a first half-cycle to a first dc output with a first polarity;

converting the ac input during a second half-cycle to a second dc output with the same polarity as the first dc output by inverting the second dc output.

24. (Original) A method for providing a dual output transformerless power supply, according to claim 23, further comprising the step of:

providing a relay voltage.

25. (Original) A method for providing a dual output transformerless power supply, according to claim 24, further comprising the step of:

controlling the relay voltage with a control circuit.